

U.S. Patent Application Serial No. 10/542,971
Reply to Office Action dated April October 29, 2007

Remarks:

Applicants have read and considered the Office Action dated October 29, 2007 and the references cited therein. Claims 1 and 7 have been amended. Claims 12-14 have been added. Claims 1, 3-9 and 11-14 are currently pending. Reconsideration and reexamination are hereby requested.

In the Action, the title was objected to. The title has been amended to read METHOD AND SYSTEM FOR INSPECTING BOTTLES. Applicants assert that the title is descriptive and is compliant.

Claim 1 was objected to as the word "radiation" is spelled incorrectly. The claim has been amended to correct the typographical error and Applicants assert that the objection has been overcome.

Claim 7 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claim 7 recites "such as" and it is unclear whether the limitations following that phrase are part of the claimed invention. Claim 7 has been amended to delete the language in question and is believed to overcome the rejection. Applicants request that the rejection under 35 U.S.C. § 112, second paragraph, be withdrawn.

Claims 1, 3, 4, 7 and 8 were rejected under 35 U.S.C. § 102(b) as being anticipated by Ometz et al. With regard to claim 1, the Office Action states that Ometz et al. discloses a method for inspecting packagings for a liquid product including: setting a packaging into rotation, irradiating the packaging during the rotations with a radiation of a predetermined wavelength, making at least one series of at least two recordings of at least a part of the content of the packaging during rotation, with an image recording device suitable for making recordings

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at the predetermined wavelength, wherein the packaging is situated in substantially the same rotational position relative to the recording device during successive recordings of the series. Applicants respectfully traverse the rejection.

In Ometz et al., images are taken from different angles of the bottles so that particles in the fluid which are spinning with a different speed than the bottle could be detected. As the images are taken at different time intervals, they are therefore taken at different angles relative to any location on the bottle. Ometz et al. discuss that such an approach is advantageous to filtering out background noise. Ometz et al. also discuss that this would eliminate the influence of markings, stamps and logos on the packaging. Applicants assert that Ometz therefore teaches away from taking successive recordings of the series with the packaging in *the same rotational position* relative to the recording device, as recited in claim 1. The method of the present application provides for taking subsequent images after a variable number of complete 360 degree revolutions. Although the bottle is spinning, the images are always taken with the bottle at the same rotational position relative to the scanner. This provides for direct comparison of successive images at the same position so that the images should be identical if there are no impurities. However, the contents and any impurity will have a different displacement and position in the successive images, therefore providing for improved detection. This precise comparison is not possible with the Ometz device. For at least these reasons, Applicants assert that claims 1, 3, 4, 7 and 8 patentably distinguish over Ometz et al. and request that the rejection under 35 U.S.C. § 102(b) be withdrawn.

Claims 1 and 6 were rejected under 35 U.S.C. § 102(b) as being anticipated by Manique et al. The Office Action states that with regard to claim 1, Manique discloses a method for inspecting packagings for a liquid product including setting a packaging in the rotation, irradiating the packaging during the rotations with a radiation of a predetermined wavelength, making at least one series of at least two recordings of at least a part of the content of the

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packaging during rotation, with an image recording device suitable for making recordings at the predetermined wavelength, wherein the packaging is situated in substantially the same rotational position relative to the recording device during successive recordings of the series. Applicants respectfully traverse the rejection.

Applicants assert that Manique neither teaches nor suggests taking a substantive recording of the bottle with the bottle being in the same rotational position while spinning. As discussed above, the present invention provides advantages for inspection and for determining whether particles are present in the content that are not possible with the prior art including Manique et al. Applicants assert that the recited method patentably distinguishes over Manique et al. and requests that the rejection be withdrawn.

Claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Ometz et al., in view of Ishikawa. The Office Action states that Ishikawa discloses a system that rotates packaging in two directions and that it would have been obvious to vary the direction of rotation of Ometz et al. as taught by Ishikawa. As discussed above, claim 1, from which claim 6 depends, patentably distinguishes over Ometz. Ishikawa fails to remedy the shortcomings of Ometz et al. Therefore, Applicants assert that claim 1 patentably distinguishes over Ometz et al. and Ishikawa and that claim 6 also patentably distinguishes over Ometz et al. and Ishikawa. Applicants therefore request that the rejection under 35 U.S.C. § 103(a) be withdrawn.

Claims 9 and 11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ometz et al. in view of Katane et al. As discussed above, claim 1 patentably distinguishes over Ometz et al. Applicants assert that Katane et al. fails to remedy the shortcomings of Ometz et al. and that claim 1 patentably distinguishes over the Ometz et al. and Katane et al. Therefore, Applicants also assert that claims 9 and 11, depending from claim 1, patentably distinguish over

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the combination of Ometz et al., Katane et al. and any other prior art or combination thereof. Applicants therefore request that the rejection under 35 U.S.C. § 103(a) be withdrawn.

New claim 12 recites that the image recording device is disposed at an angle relative to the axis of rotation greater than 90 degrees and less than 180 degrees. This is neither shown nor suggested by the prior art and is not obvious in view of the prior art. As discussed in the Application and shown in Figures 1, 9, 11 and 13, this positioning provides a fuller image of the bottle. Imaging can be performed more quickly and the images are less likely to be influenced by dirt, especially when the camera is facing down at an angle. This provides for improved scanning of the bottom of the bottle, which has a normally arched or concave or at least, non-planar bottom that increase the difficulty in detecting impurities. The prior art does not teach or suggest positioning the image recording device at the recited oblique angle and there is no motivation for one of ordinary skill in the art to position the image recording device at an oblique angle relative to the axis of rotation. Applicants assert that claim 12 provides advantages that are neither shown nor suggested by the prior art and is allowable over the prior art.

New claims 13 and 14 recite positioning direction of the radiation at an angle greater than 90 degrees and less than 180 degrees from the axis of rotation. The placement of the radiation allows for easier detection due to shadows created by any impurity in the content of the container. Applicants assert that the prior art fails to teach or suggest such positioning of the radiation and that there is no motivation to modify the prior art as recited in the claims. Applicants assert that claims 13 and 14 patentably distinguish over the prior art and are in condition for allowance.

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Applicants assert that the claims patentably distinguish over the prior art and that the application is in condition for allowance. A speedy and favorable action in the form of a Notice of Allowance is hereby solicited. If the Examiner feels that a telephone interview may be helpful in this matter, please contact Applicants' Representative at (612) 336-4728.



Respectfully submitted,

MERCHANT & GOULD P.C.

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